

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Claims 1 – 11 (Cancelled)**

12. (Previously Presented) A method of fabricating a semiconductor device having a ferroelectric capacitor, comprising the steps of:

- forming an active device element on a substrate;
- forming an insulation film over said substrate to cover said active device element;
- forming a lower electrode layer of said ferroelectric capacitor over said insulation film, such that said lower electrode is formed on a layer containing Ti;
- forming a ferroelectric film on said lower electrode as a capacitor insulation film of said ferroelectric capacitor;
- crystallizing said ferroelectric film by applying a thermal annealing process in an O<sub>2</sub> atmosphere under a reduced total pressure in the range between 1 Torr and 40 Torr such that peeling of the ferroelectric film is substantially reduced; and
- forming an upper electrode layer on said ferroelectric film.

**Claims 13 – 14 (Cancelled)**

15. (Previously Presented) A semiconductor device, comprising:

- a substrate;
- an active device element formed on said substrate;
- an insulation film provided over said substrate to cover said active device element;
- a lower electrode containing Pt provided over said insulation film;
- a PZT ferroelectric film provided on said lower electrode, said PZT ferroelectric film having a columnar microstructure extending from an interface between said lower electrode and said PZT ferroelectric film in a direction substantially perpendicular to a principal surface of said lower electrode, said PZT ferroelectric film generally having a <111> orientation extending continuously from a bottom surface of said PZT ferroelectric film to a top surface of said PZT ferroelectric film and consisting of crystal

grains generally having said <111> orientation and a substantially uniform grain diameter of less than about 200nm; and

an upper electrode provided on said PZT ferroelectric film.

16. (Previously Presented) A semiconductor device as claimed in claim 15, wherein said crystal grains constituting said PZT ferroelectric film have an average diameter of about 150 nm.

17. (Original) A semiconductor device as claimed in claim 15, wherein said lower electrode comprises a Ti layer and a conductor layer provided further on said Ti layer.

18. (Original) A semiconductor device as claimed in claim 17, wherein said conductor layer is formed of Pt.

19. (Previously Presented) A semiconductor device as claimed in claim 17, wherein said PZT ferroelectric film has a perovskite structure.

Claims 20 – 28 (Cancelled)